MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

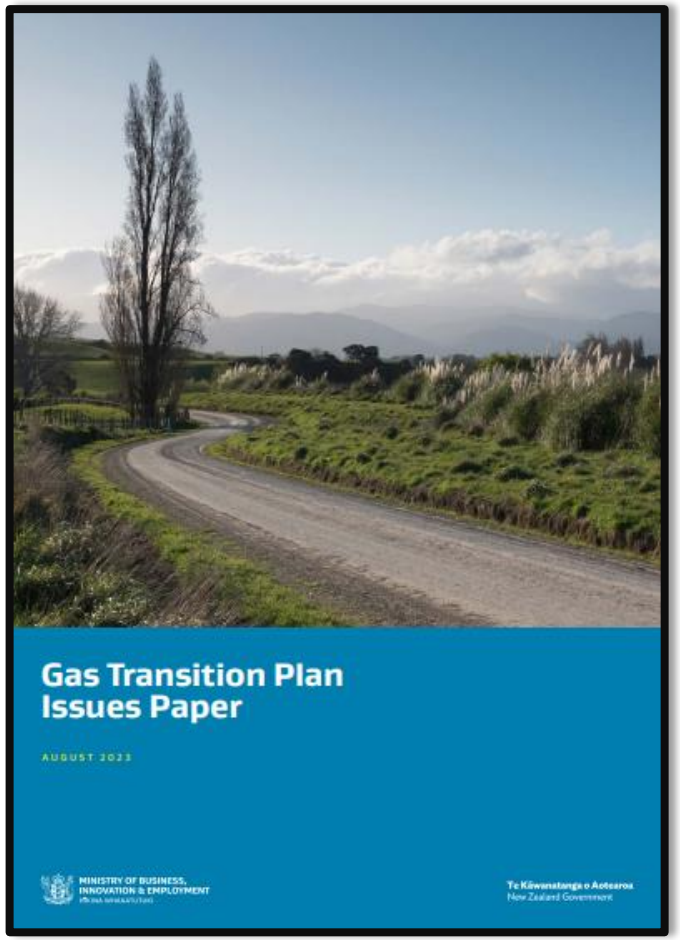
Advancing New Zealand's energy transition – The Gas Transition Plan

30 August 2023

Te Kāwanatanga o Aotearoa
New Zealand Government

Purpose

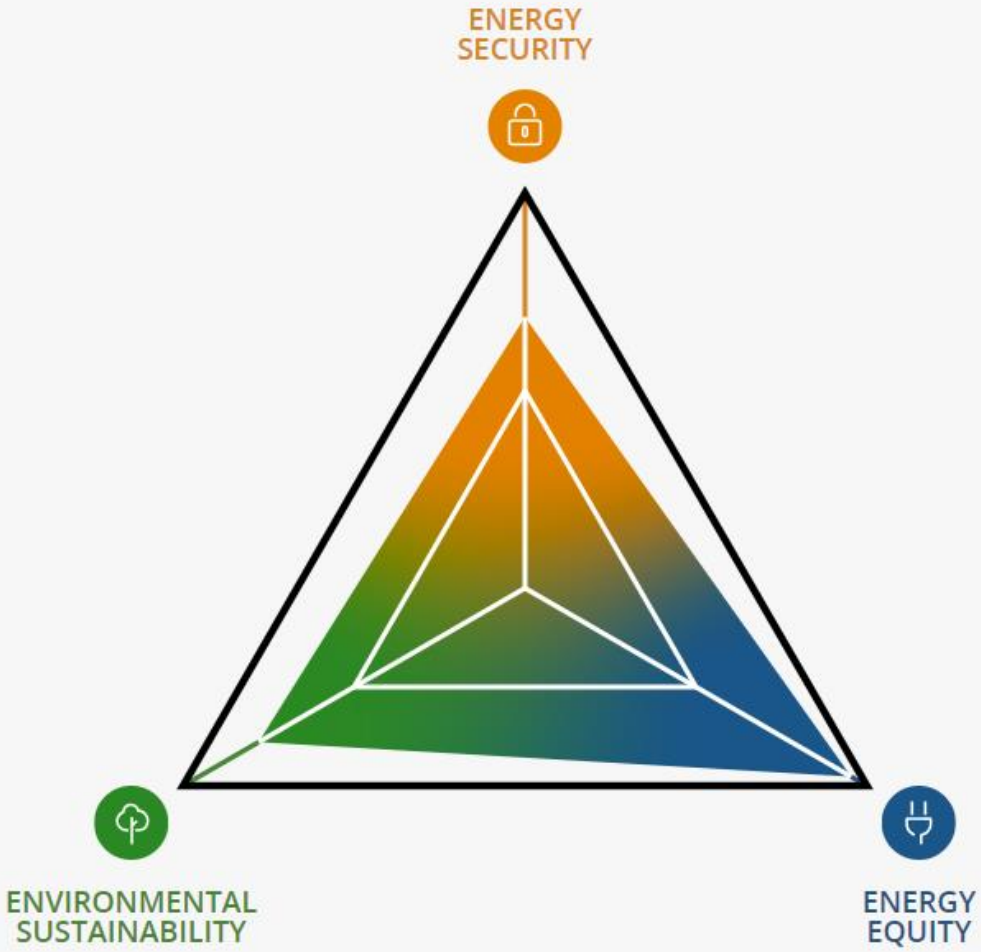
- A quick overview of the energy transition work.
- How the Gas Transition Plan fits within the overall energy transition and the broader system settings.
- Key points in the Gas Transition Plan issues paper.
- Provide you with an opportunity to ask us questions.



A very familiar trilemma

Shows the three essential components of a successful energy system…

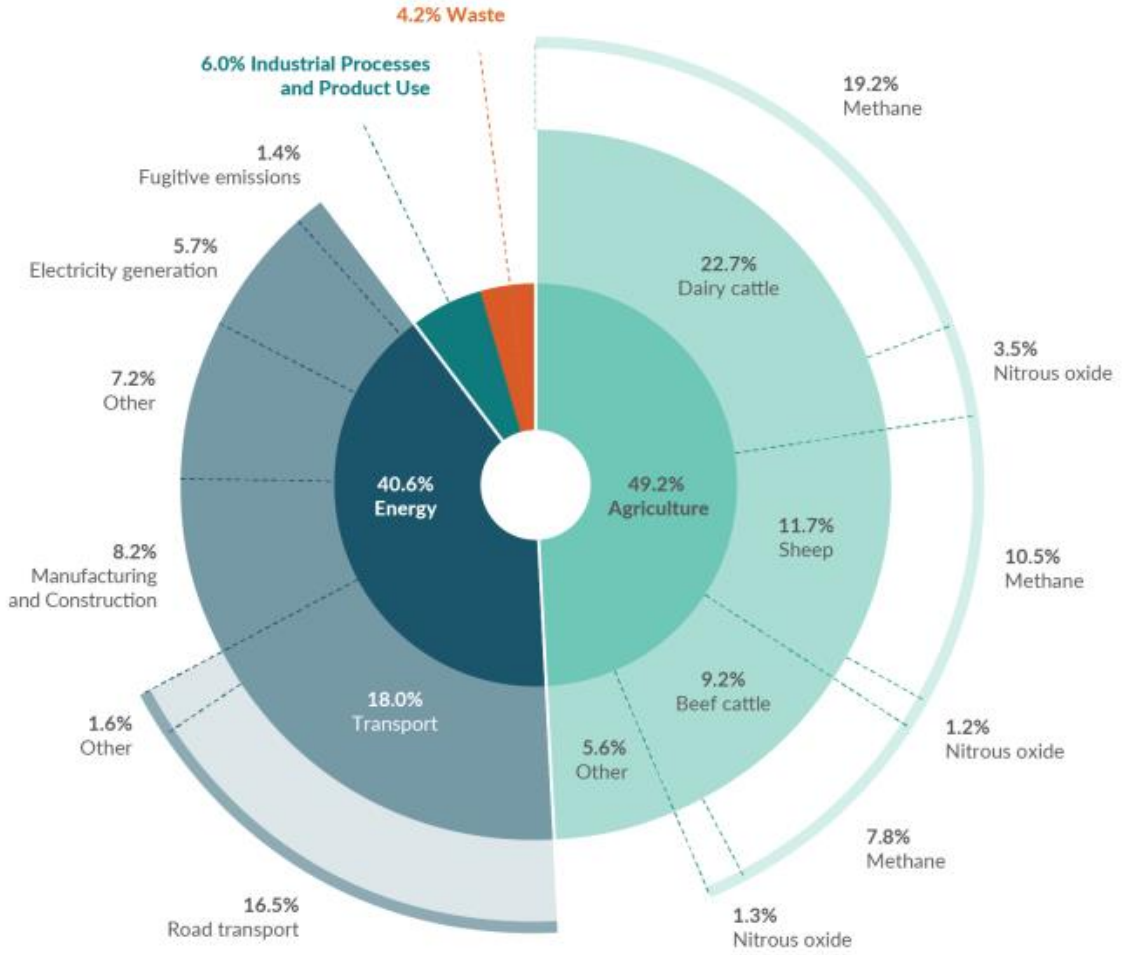
…and more importantly makes it clear that the trade-offs need to be managed.



Shifting to a low-carbon energy system is the big challenge

The energy system is responsible for around 40% of our greenhouse gas emissions.

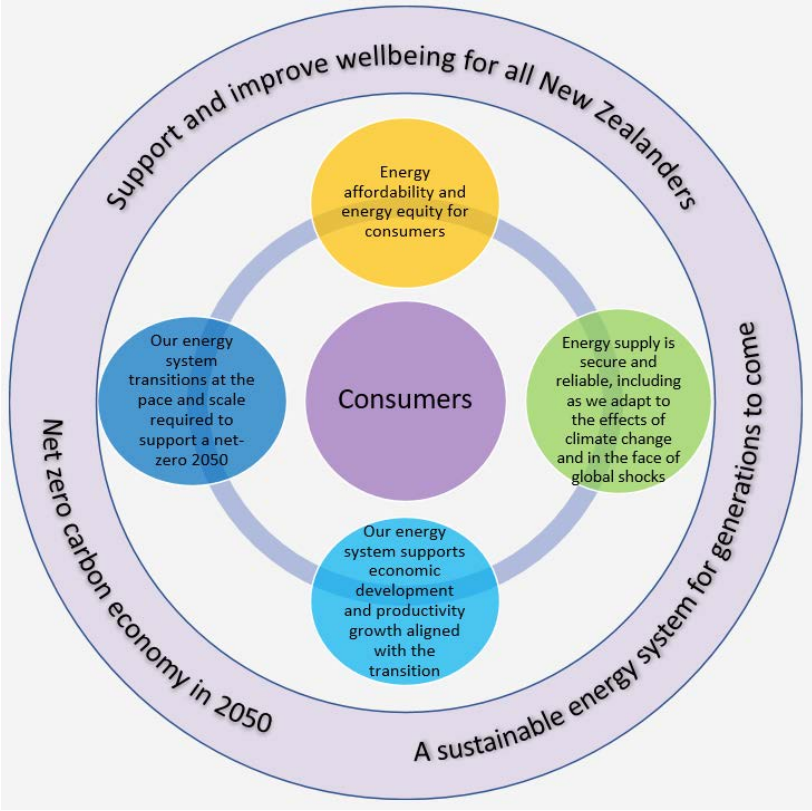
To get to net zero 2050, this has to reduce substantially.



Gross greenhouse gas emissions in 2021 by sector and greenhouse type

The Energy Strategy will chart a path for the energy transition

- The Energy Strategy aims to set direction for how we transition the energy system to a low emissions future.
- It adds as economic lens to the trilemma.
- It will serve as the overall framework for the entire energy transition.
- The aim is for a discussion document on the Energy Strategy to be released for public consultation around the end of the year.
- The final Energy Strategy by the end of 2024.



How does the Energy Strategy impact the Gas Transition Plan?

- The GTP is being developed within the context of the Energy Strategy framework.
- The transition will be about getting the balance between the four elements right for New Zealand.
- There will be trade-offs between elements – we can’t have everything but we need to make sure we understand and are clear about the costs and benefits of taking different approaches.
- This is not just about reducing emissions as fast as possible – it is about having a transition that supports climate goals and also makes the right trade-offs with energy and the economy.

Why have we released an issues paper?

- To deliver an effective plan need to make sure we understand the views of stakeholders, Māori, and the public.
- These views need to be incorporated into the design of the plan – its important that we hear and take them into account – this is a key part of public policy development.
- We acknowledge many in the sector have been expecting this earlier, we needed to take the time to get this right.
- All of the work already competed in conjunction with the Gas Industry Company (the co-regulator) and from the published research reports are being used in the development of the plan.

Key issues for the plan to consider

- We will need gas for the security of the electricity supply for some years to come – this will get more important for firming and peaking as the volume of renewables increase.
- Gas will also continue to play a part in the economy as feedstock and as a part of industrial, commercial and residential activity.
- Gas supply in underpinned by ongoing investment that needs to continue at a rate to ensure the volume of supply.
- Gas demand will decline with increased electrification, greater use of renewable gases and a shift away from gas for baseload electricity generation.
- An unmanaged transition will create challenges for the economic operation of the pipeline network and the ability to supply enough gas to meet variable demand.

Key points – alternative gases

- Some biogas can be upgraded to biomethane, and injected into the fossil gas network at relatively low cost.
- There could be sufficient feedstock to make very large quantities of biogas technically feasible.
- But this will be expensive - possibly at prices that are not economic for electricity generators or large industry.
- Smaller quantities of biogas can be produced at a much lower cost and could play an important role in decarbonising areas of the fossil gas sector.
- Waste management and renewable gas trading will be important policy areas if biogas is to play a role in the transition.

Key points – alternative gases

- Green hydrogen could play a role in a renewable energy system.
- Blended hydrogen may be viable in the gas network, but is likely to be more expensive than other emissions reduction options until the mid-2030s.
- The existing gas pipeline system could carry up to 20 per cent hydrogen blended with fossil gas and biomethane in the North Island's reticulated gas system.
- There is the potential for green hydrogen to replace hydrogen from fossil gas in methanol production and ammonia production for fertiliser and other products and processes.
- Take a look at the Interim Hydrogen Road Map and comment by 2 November 2023.

Key points – gas system flexibility

- As well as reducing emissions from the fossil gas sector, we need to ensure energy security is maintained.
- It is likely that the needs of thermal electricity generation will become increasingly variable.
- We need ways for the gas system to become more flexible to meet the changing demand profile.
- This could be through enhancing the capacity of gas storage.
- And/or importing Liquified Natural Gas (identified as not preferred in the issues paper).

Key points – Carbon Capture and Storage

- CCS offers the opportunity for a relatively swift mechanism for the reduction of emissions for some gas uses.
- The consenting and legislative/regulatory settings allow for reinjection and off-setting but are not tailor made for CCS.
- CCS also offers an opportunity for high CO2 content gas to be viable to produce.
- Having CCS removals in the ETS would be likely to make removal activity more economically viable.

CCS and the Carbon Removal Strategy

- The ETS review announced the development of a Carbon Removal Strategy.
- This will include “engineered solutions” as well as natural solutions.
- MBIE will be working with the Ministry for the Environment on the development – it will be very important to get the sector’s views on getting an effective system.
- There is a page on the MfE website with initial information and the initial Cabinet paper has also been released.
- Look for a draft strategy end around the end of 2023.

Take away messages

- Please have your say and encourage others to make submissions – your views will be important in the development of the Plan.

- The Gas Transition Plan is part of the wider energy transition and it will need to balance risks, economic and social value, and emissions.

- We need to make sure we get it right – the transition is too important to New Zealand not to.

Next steps

- Have your say – on all of the transition documents – consultation closes on 2 November 2023.

- We are happy to meet and discuss the documents in more detail – let us know through the gastransition@mbie.govt.nz email.

Thank you.

Questions

Ministry of Business, Innovation & Employment
www.mbie.govt.nz